

Amendments to the Claims

Claim 1 (**Currently Amended**) A multiple decoding apparatus for receiving a signal composed of a plurality of encoded data and for simultaneously decoding two or more of the encoded data, the multiple decoding apparatus comprising:

- a reproduction controller for outputting control information related to decoding and reproduction of data;

- a data extractor for receiving the signal and extracting ~~the two or more encoded data~~ at least audio data and video data which are designated by the control information;

- a buffer for storing the two or more encoded data at least the audio data and the video data extracted by said data extractor;

- a buffer manager for controlling said buffer in accordance with the control information for said buffer;

- a data flow controller for distributing ~~the two or more encoded data~~ at least the audio data and the video data stored in said buffer for each data type and transferring ~~the two or more encoded data~~ at least the audio data and the video data in accordance with provided transfer conditions;

- a plurality of separate buffers for respectively storing ~~the two or more encoded data~~ at least the audio data and the video data distributed and transferred by said data flow controller according to each data type;

- a separate buffer manager for controlling output of at least the audio data and the video data ~~the two or more encoded data~~ respectively stored in said plurality of separate buffers so as to be associated with each other in accordance with information for specifying said plurality of separate buffers;

- a plurality of decoders respectively corresponding to said plurality of separate buffers for decoding at least the audio data and the video data ~~the two or more encoded data~~ stored in said plurality of separate buffers and outputting two or more decoded data; and

- a decoding controller for selecting a separate buffer and a decoder, which are used for the decoding, according to a usage status of said decoder from among said plurality of separate buffers and said plurality of decoders in accordance with the control information, and outputting information related to said separate buffer selected by said decoding controller, the transfer

conditions based on said separate buffer selected by said decoding controller, and an instruction to start decoding, respectively, to said separate buffer manager, said data flow controller, and said decoder selected by said decoding controller,

wherein said buffer manager outputs, when said buffer becomes full of at least the audio data and the video data ~~the two or more encoded data~~, an overflow notification to said reproduction controller,

wherein said reproduction controller outputs, upon receipt of the overflow notification, an instruction to stop data extraction to said data extractor, and outputs an initialization instruction to said decoding controller,

wherein said decoding controller outputs, upon receipt of the initialization instruction from said reproduction controller, an instruction to initialize all of said plurality of separate buffers to said separate buffer manager, outputs an instruction to initialize said buffer to said buffer manager, and respectively outputs instructions to stop decoding to all of said plurality of decoders,

wherein said buffer manager initializes said buffer in accordance with the instruction to initialize said buffer from said decoding controller,

wherein said separate buffer manager initializes all of said plurality of separate buffers in accordance with the instruction to initialize all of said plurality of separate buffers from said decoding controller, and

wherein the multiple decoding apparatus resumes all processing which was stopped when said buffer became full after said buffer and said plurality of separate buffers are initialized.

Claim 2 (Canceled)

Claim 3 (Currently Amended) The multiple decoding apparatus according to claim 1, wherein

said separate buffer manager outputs, when a specific separate buffer becomes full of data, an overflow notification that said specific separate buffer overflows to said decoding controller,

said decoding controller outputs, upon receipt of the overflow notification that said specific separate buffer overflows, an instruction to stop data transfer to said specific separate

buffer to said data flow controller, outputs an instruction to stop decoding to a decoder corresponding to said specific separate buffer, and outputs an instruction to initialize said specific separate buffer to said separate buffer manager,

said separate buffer manager initializes said specific separate buffer in accordance with the instruction to initialize said specific separate buffer from said decoding controller, and

the multiple decoding apparatus resumes all processing which was stopped as a result of said specific separate buffer becoming full after said specific separate buffer is initialized.

Claim 4 (Currently Amended) The multiple decoding apparatus according to claim 1, wherein

said separate buffer manager outputs, when a specific separate buffer becomes full of data, an overflow notification that said specific separate buffer overflows to said decoding controller,

said decoding controller outputs, upon receipt of the overflow notification that said specific separate buffer overflows, an instruction to discard the encoded data directed toward said specific separate buffer to said data flow controller, outputs an instruction to stop decoding to a decoder corresponding to said specific separate buffer, and outputs an instruction to initialize said specific separate buffer to said separate buffer manager,

said separate buffer manager initializes said specific separate buffer in accordance with the instruction to initialize said specific separate buffer from said decoding controller, and

the multiple decoding apparatus resumes all processing which was stopped as a result of said specific separate buffer becoming full, and the discard of the encoded data is released after said specific separate buffer is initialized.

Claim 5 (Currently Amended) A multiple decoding method for simultaneously decoding two or more encoded data from a signal composed of a plurality of encoded data, the multiple decoding method comprising:

selecting a plurality of decoders for performing decoding and a plurality of separate buffers corresponding to the plurality of decoders, respectively, according to usage status of the plurality of decoders;

extracting at least audio data and video data ~~the two or more encoded data~~ to be decoded and reproduced from the signal;

storing at least the extracted audio data and video data ~~two or more encoded data~~ in a buffer;

distributing at least the audio data and the video data ~~the two or more encoded data~~ stored in the buffer for each data type and respectively storing at least the audio data and the video data ~~the two or more encoded data~~ in the plurality of separate buffers according to each data type;

controlling output of at least the audio data and the video data ~~the two or more encoded data~~ stored in the separate buffers such that at least the audio data and the video data ~~the two or more encoded data~~ stored in the separate buffers are associated with each other; and

decoding, responsive to said controlling, at least the audio data and the video data ~~the two or more encoded data~~ stored in the separate buffers and outputting two or more decoded data,

wherein, when the buffer becomes full of at least the audio data and the video data ~~the two or more encoded data~~:

stopping said extracting and said decoding;

initializing the buffer and the plurality of separate buffers; and

resuming all processing which was stopped as a result of the buffer becoming full after said initializing of the buffer and the plurality of separate buffers.

Claim 6 (Canceled)

Claim 7 (Currently Amended) The multiple decoding method according to claim 5, further comprising, when a specific separate buffer becomes full of data:

stopping said distributing of ~~the~~ encoded data into the specific separate buffer and said decoding of ~~the~~ encoded data stored in the specific separate buffer;

initializing the specific separate buffer; and

resuming all processing which was stopped when the specific separate buffer became full after said initializing of the specific separate buffer.

Claim 8 (Currently Amended) The multiple decoding method according to claim 5, further comprising, when a specific separate buffer becomes full of data:

discarding ~~the~~ encoded data directed toward the specific separate buffer;

stopping said decoding of ~~the~~ encoded data stored in the specific separate buffer;

initializing the specific separate buffer; and
resuming all processing which was stopped when the specific separate buffer became full after said initializing of the specific separate buffer, and releasing the discard of the encoded data.